EFFECTS-BASED OPERATIONS

&

Time Critical Targeting What is the Relationship

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A New Mindset in Warfare

Purpose & Scope

To introduce an effects-based methodology for conducting military operations in the 21st century

- Foundation
- Effects-based Methodology
- Advantages
- Road Ahead
- TCT and the Effects

The focus at a given level of war is not on the specific weapons used, or even on the targets attacked, but rather on the desired effects . . .

— AFDD 2

Old Planning Paradigm

- Focused on destruction
  - Army focus:
    - Terrain & places
    - Fires support maneuver
  - Air focus: targets
  - What we could model/measure
- Fight-centric
- Technological advances produce incremental gains

Toward a New Paradigm

An Effects Based Operations Strategy for JV-2020

Planning: 1941

- "Industrial web" & the power grid
  - Key nodes for systemic effects sought (collapse of industrial support to war)
  - But, what could we find and measure?
    - Generator halls
    - Levels of destruction
  - Target list = known generator halls
  - Effectiveness = % destroyed

Planning: 1991

- "Simultaneous, Parallel" War and the power grid
  - "Turn lights out, send message" (a "high leverage" target set)
  - But, what could we find and measure?
    - Transformers, but. . .generator halls too
    - Levels of destruction
  - Target list = gens, transformers, gens
  - Effectiveness = % destruction! ?

Effects Based Operations
" Influencing the Battlespace "

Achieving dominance across the range of military operations through the application of new operational concepts -

- **Not a new process, but a new mindset of warfare**
  - Affects the full spectrum of operations
    - Works in Peacetime through MTW
  - Both an Offensive and Defensive mindset
    - Lethal and Non-Lethal means
  - Enables synergistic Joint Employment
  - Founded on a sound application of the Principles of War
  - Information Superiority and Dynamic C2 Enable Theater-wide EFFECTS
    - Leads to Full-Spectrum Dominance

Instead of relying on massed forces and sequential ops, we will achieve massed effects in other ways -- JV 2020

The Vision . . .

- Tap emerging ability to “see, command, and affect” the battlespace
- Develop fluid employment concept exploiting Dynamic C2 across the battlespace
- Incorporate concept into an effects-based Air-Ground-Sea maneuver scheme for realizing JFC’s intent at all levels of war

Information Superiority and advances in technology will enable us to achieve the desired effects through the tailored application of combat power -- JV 2020

New Approach: "For Effect"

Ways

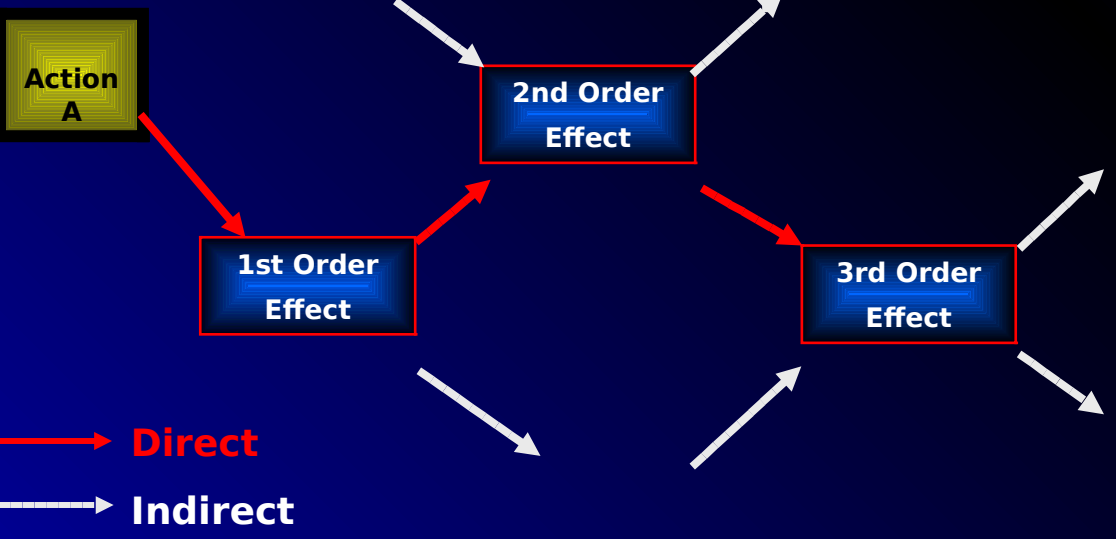
Right Info + Right Force + Right Timing = Right Effect

Means

Creating effects concurrently at all levels of war & throughout the entire battlespace

Ends

Joint Team achieving Full Spectrum Dominance

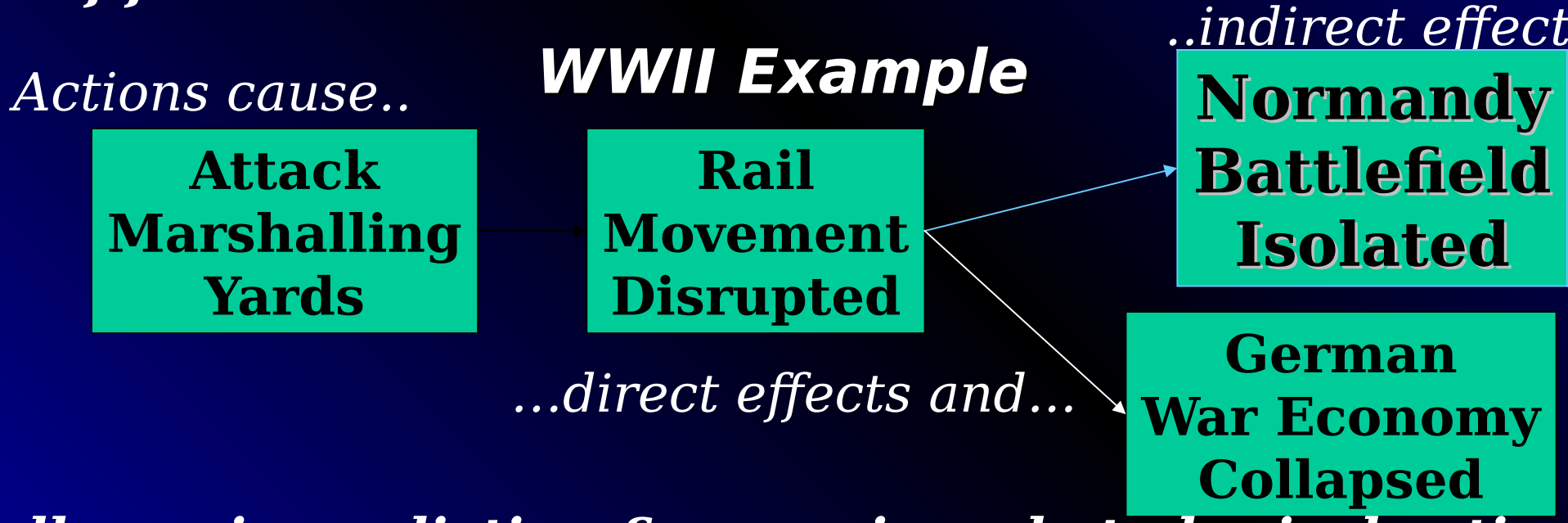


Goals:

- Increasing predictability of indirect effects
- Decreasing the unintended consequences

Effects-Based Operations

EBO is an approach--a way of thinking--that focuses
not targets, and matches the capabilities of US mili
from HMRO to MTW missions, and lethal and nonle
of force.



allenge is predicting & assessing what physical action
produce the desired behavioral effects

EBO Methodology

Task 1: Determining what effects best achieve goals

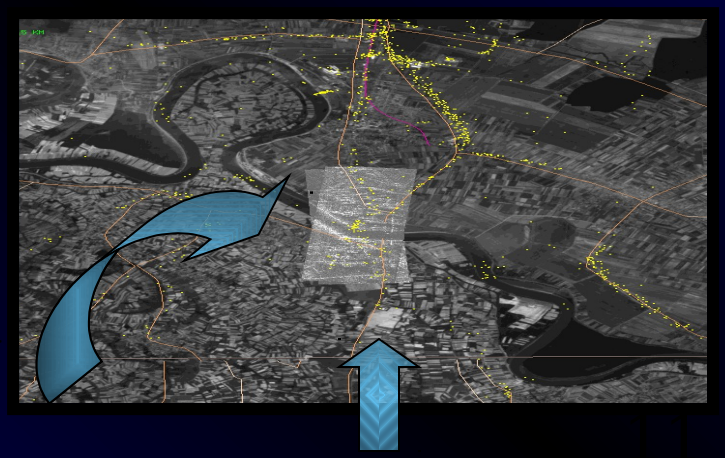
Task Imperatives

- Precise understanding of JFC objectives
- Intelligence Preparation of the Battlespace
- Strategy integration
- Direct, timely link with national and joint analysis agencies
  - Nodal analysis
  - Organizational analysis
  - Adversary intent

Transportation Networks...

ecom & Power Network

... As Well As High Value Targ



EBO Methodology

Task 2: Linking and integrating effects into theater-wide scheme of maneuver

Task Imperatives

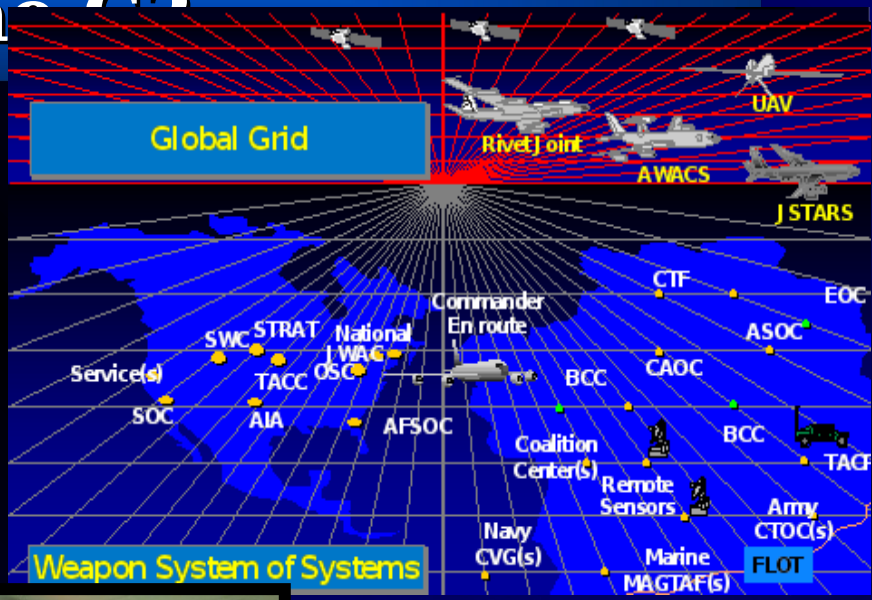
- Understanding and integration of schemes of maneuver
- Component cross-communication betwe commanders/strategy
- Mission Type Orders: “Effects-Desired”
- Targeting strategies to realize effects
  - Not necessarily physical destruction
- Integrated Information Operations

EBO Methodology

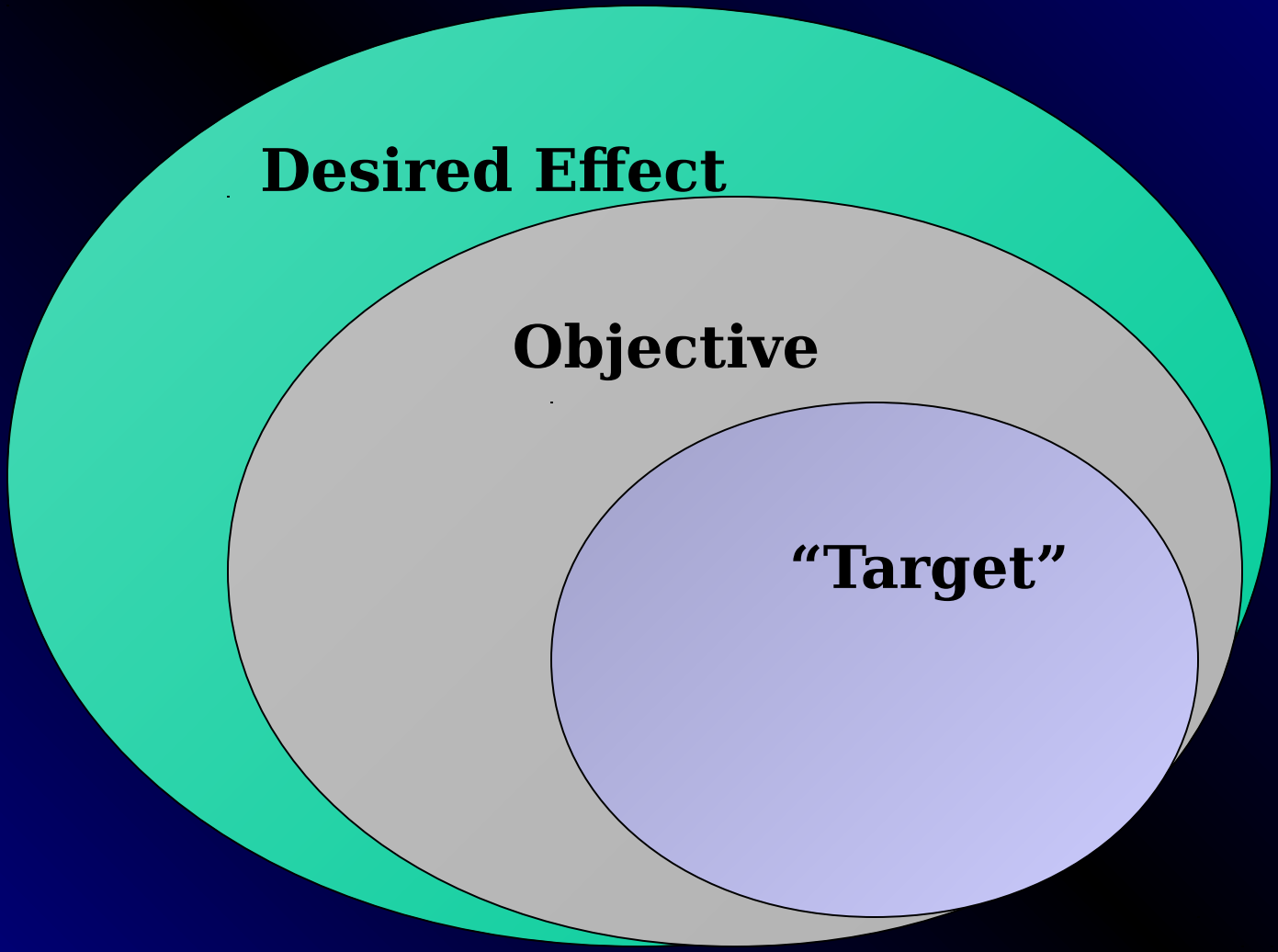
Task 3: Directing maneuver through dynamic, real time C2

Task Imperatives

- **Shared awareness**
- **Global grid**
- ***Joint,* dynamic C2 process**
  - **Changes in schemes of maneuver**
  - **Branch Plans**
  - **Shifts in Emphasis/ Weights of Effort**
- **Continuous, integrated analysis and assessment**
- **Joint sensor-to-shooter**



Effects Incorporate Objectives & Targets



Effects-based Approaches provide Commanders wit

Effect Definitions

- **Direct Effect: “Result of actions with *no intervening effect or mechanism* between act and outcome. Direct effects are usually immediate and easily recognizable.” (AKA 1st order effect)**
- **Indirect Effect : “Result created through an *intermediate effect or mechanism* to produce the final outcome,which may be physical or psychological in nature. Indirect effects tend to be delayed,and may be difficult to recognize.” (AKA 2nd, 3rd,…, *n*-order effects)**
- **Total Effect: All effects acting on a target/set/system/COG**
- **Complex effect: effect resulting from multiple direct, multiple indirect and/or direct + *n*-order effects**
  - **"The effects of dislocation, destruction and diversion *create* delays."**
  - **"Through the *combination* of destruction, disruption, diversion, delay, and deception, aerospace power is capable of denying an enemy the ability to offensively employ his forces."**
- **Cascading Effect: effect that ripples through an system, often influencing other systems as well**
  - **Typically the result of influencing nodes that are critical to multiple systems**
  - **Typically flows from higher to lower levels of war**

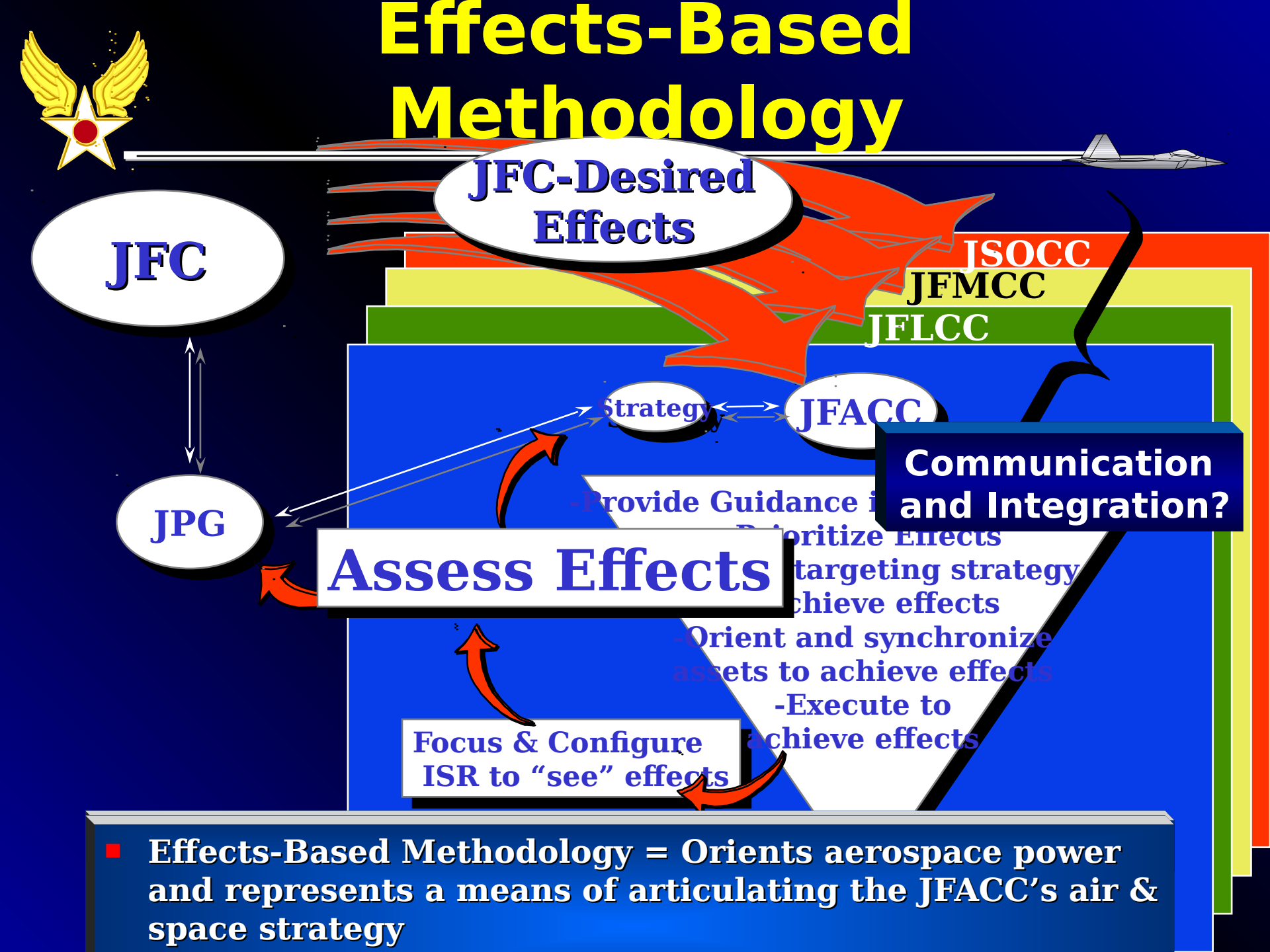
Definitions

- Effects-based vs. objectives-based vs. target-based
- No doctrinal template in approved Joint doctrine
- Physical => Behavioral
  - destroy (damage), disrupt (Kosovo), degrade, dislocate, decapitate, divert, delay (isolate), deny (halt), deceive, defend, deter (D^{11})
  - coerce: punish, threaten
- Historically and theoretically behavioral most important but hardest
  - therefore, traditionally military operations focus on physical effects
- Major problems with behavioral effects:
  - causality between action & effect
  - observability of effect
  - uncertainty of intervening variables

Comparison of Effects-Based, Objectives-Based and Targets-Based Approaches

Target-Based	Objectives-Based (Strategies-To Task)	Effects-Based
• ID enemy entities, destroy them	• Strategies at one level become objectives for next	• Addresses causality between actions and effects (direct & indirect)
• Focus: Physical effects at target level	• Focus: Objectives at every levels	• Focus: Desired effects (ph and behavioral)
• Used by tactical level Aerospace Expeditionary Task Force	• Norm for planning, assessing, executing at all levels	• EBO encompasses both ta and objectives-based appr
• No dynamic assessment	• No dynamic assessment	• Models the enemy-as-a-sy
• Looks at 1st and 2nd order effects only	• Considers linkages between objectives & strategies to achieve those objectives	• Considers many levels of • Considers enemy reaction • Offers economy-of-force
• No explicit timing considerations	• No explicit timing considerations	• Timing explicitly considered

Effects-Based Methodology



- Effects-Based Methodology = Orients aerospace power and represents a means of articulating the JFACC’s air & space strategy

Effects-Based Tasks & Measures of Merit (MOMs)

Task → **Desired Effect**

Intent & Key Indicators

MOM → **Degree of Effect** + **Duration** - **Constraints**

JOINT ISSUES

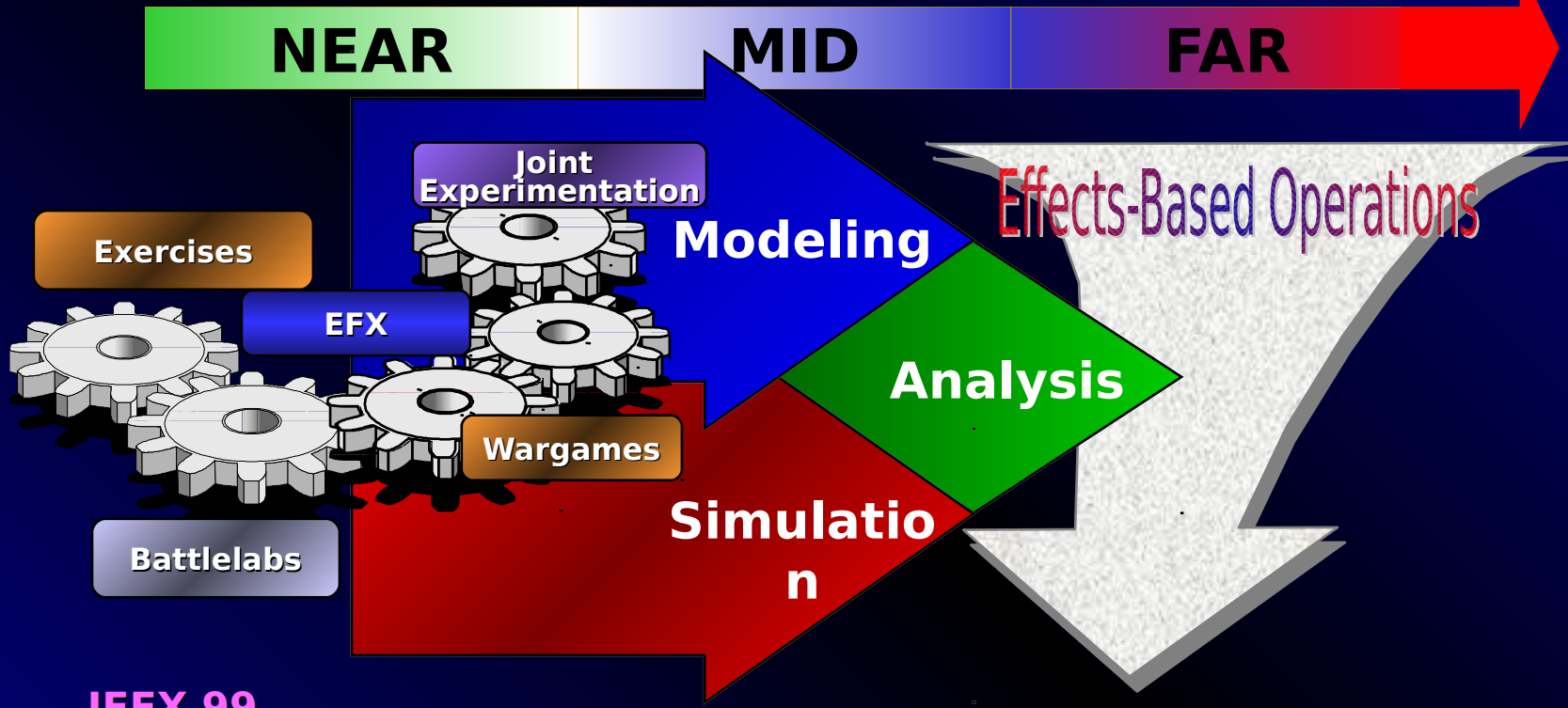
Strategy Integration **"Measurability"**

--Common Approach --ISR Limitations

--Common Language --ISR Fusion

--Synchronization --Shared

Audit Trail: Where Are We Going?



JEFX 99

- Technical Enablers
- Processes
- Concept

Navy Global

- Strategy-Task
- Effects Coordination Board
- Effects Tasking

Concept Exploration
Technical Exploration
Doctrinal Execution

Areas
Effects-Based Operations

Real-time analysis Integration

Collaborative, distributive joint aerospace tasking

Comprehensive, coherent, and se
Common Operational Picture (CO

Dynamic C2 training

Global Grid

Integrate space, air, &
information operations

Time critical targeting
Aerospace re-tasking

Schemes of Maneuver

Integration/Synchronization

Strategy cells integration

Dynamic Planning

collectio
assessment

Joint "Effects" Coordination Board

Mission-type orders

Intelligence and Data fusion

Improved Tasking, Production, Exploitation & Dissemination
(TPED)/ Processing, Analysis, and Reporting (PAR)

Commanders Cross-Talks

Transition From A Focus On Platforms To A Focus On Capabilities And Effects

TODAY:
Request by Platform
F15C
F16CJ
F15E
B2 / B1B
JSTARS

TOMORROW:
Request by
Function
Counterair--
OCA/DCA
Counterland-
AI/CAS
Strategic Attack
Surveillance
Reconnaissance
CSAR
Command &
Control

AEF Toolbox

Summary

- EBO enables Theater-Wide Effects
  - Psychological, Physical, Logistical, Leadership, Infrastructure, Cyber, Space, Security, Mobility,

    Political, Attritional
    - Direct and Indirect
    - Lethal and Non-Lethal
    - Offensive and Defensive
- EBO affects both the Supported and Supporting Commanders
- Strategy to Task -- What is the Desired End State?

These concepts will be realized fully only by:

Joint Integration,
Innovation & Experimentation

Time Critical Targeting

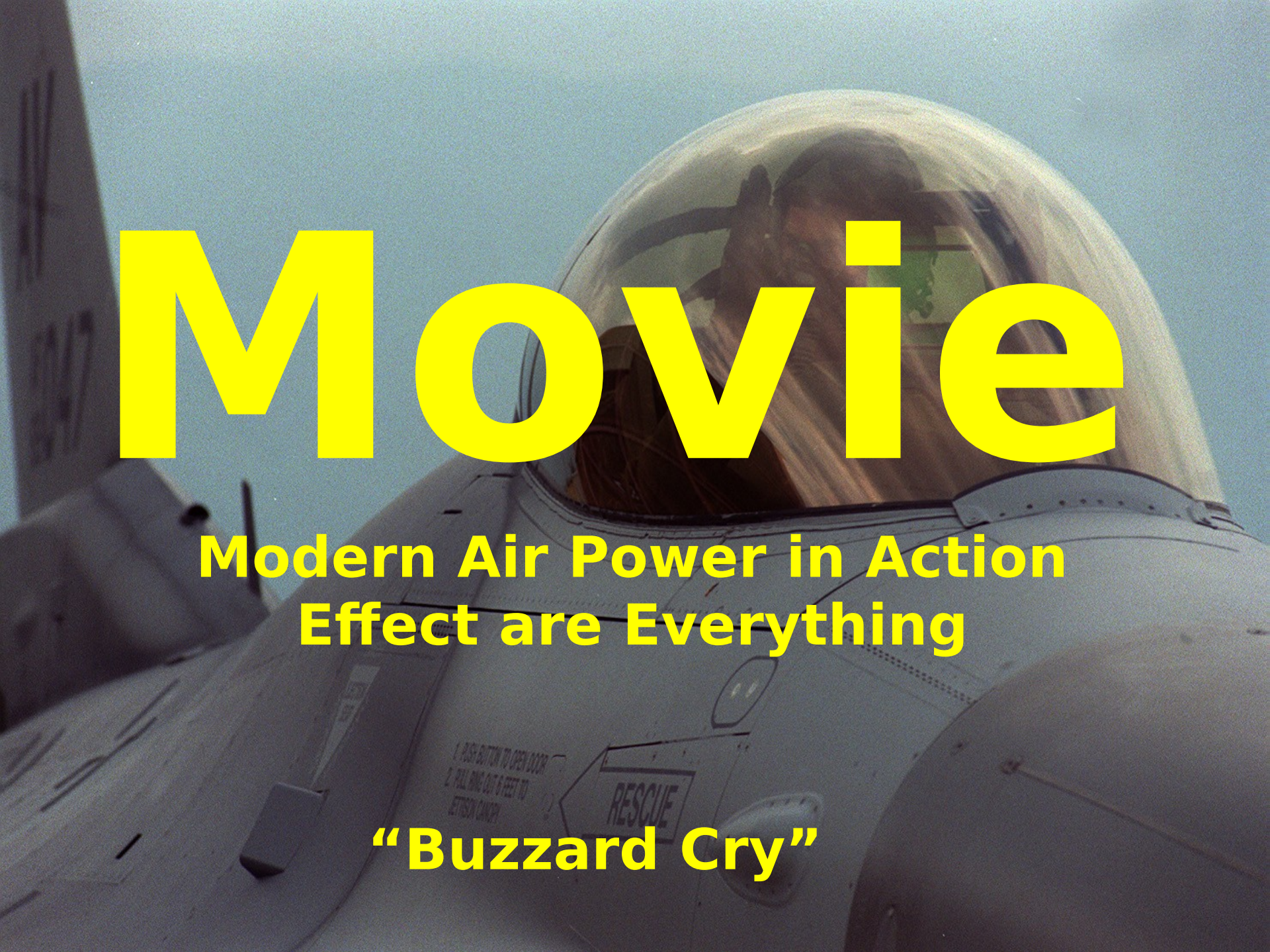
It's a verb not a noun

Lt Col Dave "Face" Nichols

My view :

Today – HAF XOCI

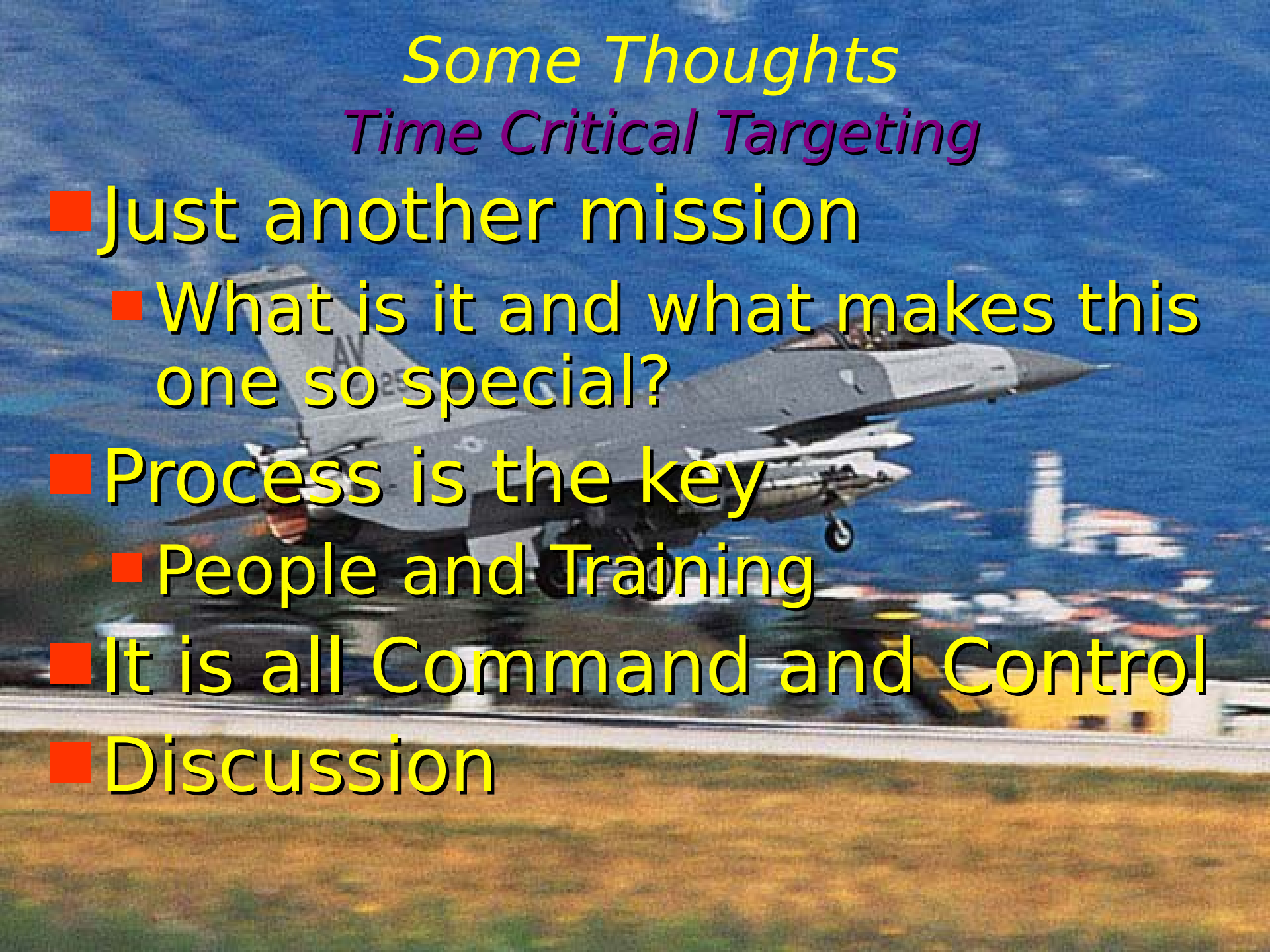
June 1996-June 1999 - 510th FS Aviano AB



Movie

Modern Air Power in Action
Effect are Everything

“Buzzard Cry”



Some Thoughts
Time Critical Targeting

- Just another mission
  - What is it and what makes this one so special?
- Process is the key
  - People and Training
- It is all Command and Control
- Discussion

What is TCT?

Joint Definitions

TCT is a process to achieve the Desired Effec

HPT List (HPTL) Established by JFC

Perishable but not Prioritized

Our Daily Tasks:

Execution

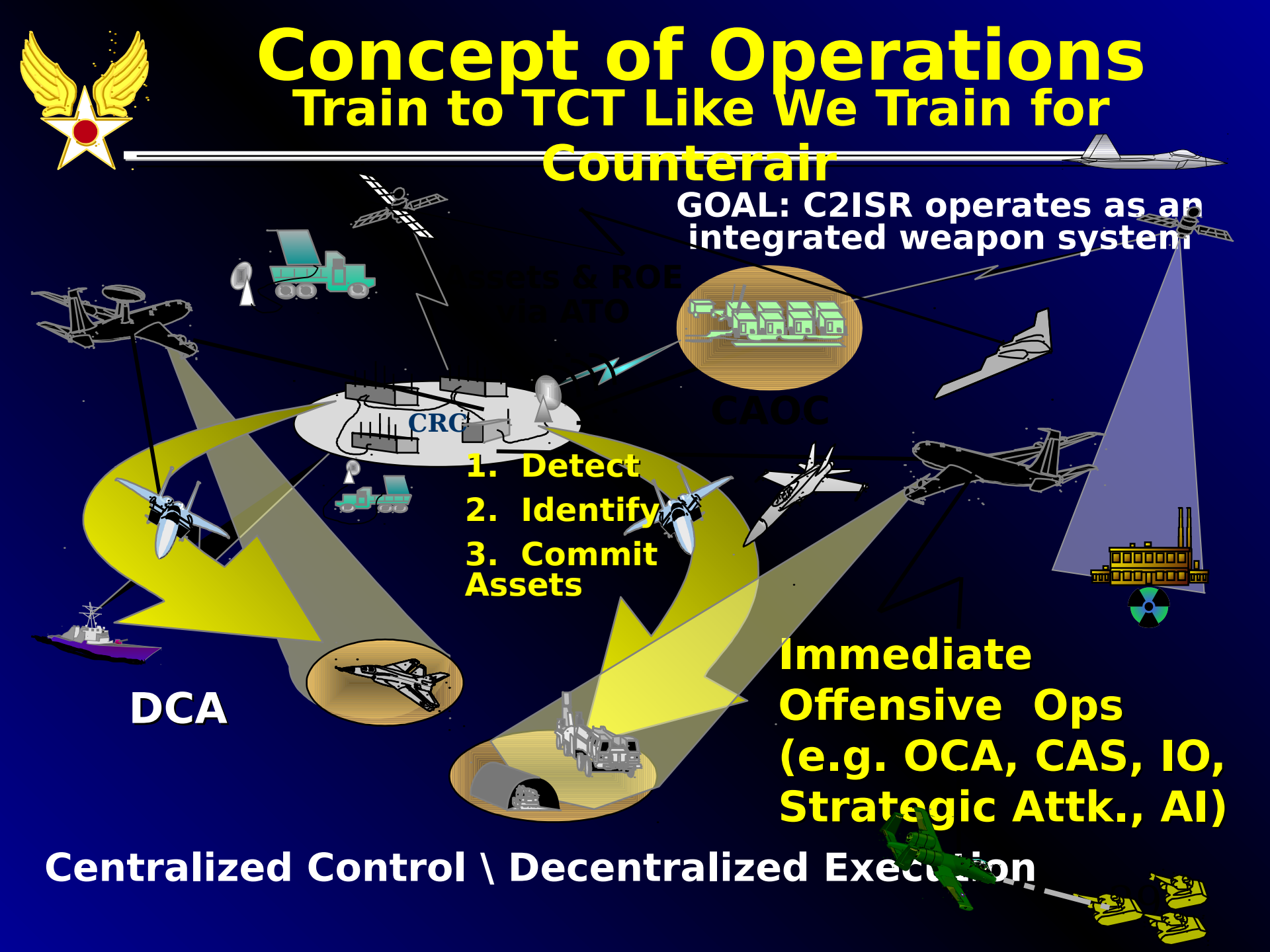
Execution falls into three categories:

- **Fixed target--planned events**
- **Planned dynamic--known targets, but unable to fix in advance**
- **Unplanned dynamic--not known in advance**
- **TCT can involve any one of these**

We do not train to it
It is difficult

Concept of Operations

Train to TCT Like We Train for Counterair



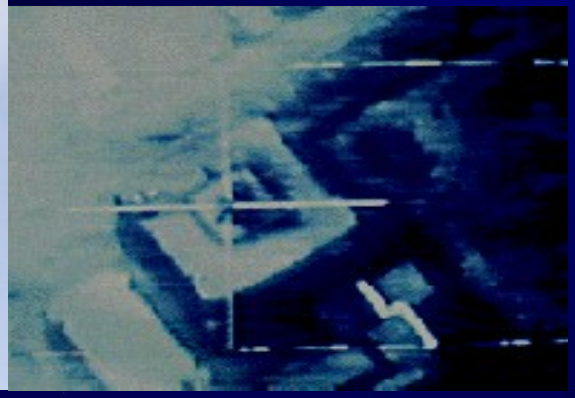
Fielded Forces in Kosovo

"Demonstrate NATO Resolve and deter Milosevic from continuing and escalating the ethnic cleansing by systematically and progressively attacking, disrupting, degrading, and devastating Serb military targets" Gen Wesley Clark

- **Desired Effect & Military Objective**
  - **Commander's Intent (US Army)**
  - **Politically Constrained**
- **How do you measure this?**
  - **Count Things? No**
  - **Misery Index?**
- **Use "Effects Based Thinking" to solve problem**
  - **Jet Noise 24 hours/day……**

Discussion

- Effects
  - Actual
  - Desired
  - How to Measure
    - May involve counting things
- Operational Art
  - Education, Training and Currency
- Technology vs process



Question
s?

Back Up Slides

Clear Objectives - *late*

- **Clearly Stated at** 23-24 April 1999 **NAC meeting in Washington DC**
  - *The crisis in Kosovo represents a fundamental challenge to the values for which NATO has stood since ists foundation: democracy, human rights and the rule of law. It is a culmination of a deliberate policy of oppression, ethnic cleansing and violence pursued by the Belgrade regime under the direction fo President Milosevic. We will not allow this compaign of terror to succeed. NATO is determined to prevail.*
  - UN Secretary General and European Union: *a peaceful, multi-ethnic and democratic Kosovo where all its people can live in security and enjoy universal human rights and freedom on an equal basis*

Clear Objectives

The Famous 5 Conditions

Our military actions are directed not at the Serb people but at the policies of the regime in Belgrade, which has repeatedly rejected all efforts to solve the crisis peacefully. President Milosevic must:

- *Ensure a verifiable stop to all military action and the immediate ending of violence and repression in Kosovo*
- *Withdraw from Kosovo his military, police and para-military forces*
- *Agree to the stationing in Kosovo of an international military presence*
- *Agree to the unconditional and safe return of all refugees and displaced persons, and unhindered access to them by humanitarian aid organisations; and*
- *Provide credible assurance of his willingness to work for the establishment of a political framework agreement based on the Rambouillet accords*